506666016 05/17/2021

EPAS ID: PAT6712831

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

 SUBMISSION TYPE:
 NEW ASSIGNMENT

 NATURE OF CONVEYANCE:
 ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JEFFREY DAVID SELWYN DIWAKAR ABRAHAM	11/28/2017
ANANTH VEMURI	11/28/2017
MICHAEL HAAS	11/28/2017
ADAM W. KIDD	12/05/2017

RECEIVING PARTY DATA

Name:	CUMMINS INC
Street Address:	500 JACKSON STREET
City:	COLUMBUS
State/Country:	INDIANA
Postal Code:	47201

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17321853

CORRESPONDENCE DATA

Fax Number: (317)713-3699

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 13177133500

Email: Taft-IP-Docket@taftlaw.com
Correspondent Name: DOUGLAS A. COLLIER

Address Line 1: TAFT STETTINIUS & HOLLISTER LLP

Address Line 2: SUITE 3500

Address Line 4: INDIANAPOLIS, INDIANA 46204

ATTORNEY DOCKET NUMBER:	CECO-1939
NAME OF SUBMITTER:	LISA SCHODROWSKI
SIGNATURE:	/Lisa Schodrowski/
DATE SIGNED:	05/17/2021

Total Attachments: 8

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PATENT 506666016 REEL: 056259 FRAME: 0226

PATENT REEL: 056259 FRAME: 0227

COMBINED DECLARATION AND ASSIGNMENT OF PATENT RIGHTS

WHEREAS, the below-named persons (hereinafter referred to as "Assignors" or "Inventors") have made one or more new and useful inventions which are claimed, disclosed and/or described in the patent application identified in Section 1. below (hereinafter collectively referred to as "the Invention");

WHEREAS, Cummins Inc. (hereinafter referred to as "Assignee") a legal entity organized under the laws of Indiana, desires to acquire the entire right, title and interest in to and under the Invention and any and all United States, foreign and international patent applications and patents which claim, disclose and/or describe the Invention; and

NOW, THEREFORE, for good, valuable and sufficient consideration to the Assignors, the receipt and sufficiency of which are hereby acknowledged, Assignors and Assignee agree as follows:

I. DECLARATION

As one of the below-named Inventors I hereby declare that:

This declaration is directed to the application entitled METHOD, ENGINE, AND CONTROL SYSTEM FOR CONTROLLING SOOT LOADING OF EXHAUST GAS AFTERTREATMENT COMPONENTS which:

X is	attached hereto, or			
)	vas filed as U.S. or PCT Application	No	on	
The	above-identified application was mad	le or authori	zed to be made by me.	

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

II. ASSIGNMENT OF PATENT RIGHTS

A. Assignment of Patent Rights

Assignors hereby assign and transfer to Assignee, its successors and assigns, the entire right, title, and interest in to and under (i) the Invention, (ii) any and all United States, foreign and international patent applications which claim, disclose or describe the Invention including, without limitation, the application identified in Section I. above, (iii) any and all continuations, continuations-in-part, divisionals, foreign counterparts, reexaminations, reissues, extensions and applications claiming the benefit of or priority to any of the foregoing, (iv) any and all rights to claim priority to any of the foregoing, and (v) any and all rights to bring an action under, receive and collect damages for infringement of any of the foregoing and/or obtain injunctive relief for infringement of any of foregoing (hereinafter collectively referred to as "the Assigned Patent Rights").

Assignors acknowledge and agree that the Assigned Patent Rights include any and all asfiled and future applications not filed at the time of execution of this agreement which disclose, describe and/or claim subject matter of the Invention, or which claim priority to or the benefit of an application or patent which discloses, describes and/or claims subject matter of the Invention. With respect to such future applications, Assignors hereby authorize Assignee, its counsel, or its agents to append information identifying such applications as an Exhibit A to this document at the discretion of Assignee, its attorneys, or its agents.

B. Agreement to Execute Additional Documents and Provide Further Assistance

Assignors agree to execute any and all other documents necessary or desirable to document, memorialize or perfect Assignee's interest in the Assigned Patent Rights and to execute any and all other documents and to provide any further assistance necessary or desirable for the procurement of patent

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rights on the above referenced invention in the United Sates and all foreign countries.

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C. Binding, Complete and Enforceable Agreement

Assignors acknowledge that (i) this is an enforceable agreement; (ii) this agreement embodies the entire and only understanding between Assignors and Assignee with respect to the subject matter of this agreement; (iii) no oral explanation or oral information by either party hereto shall alter the meaning or interpretation of this agreement; and (iv) if any provision of this agreement is held to be unlawful or unenforceable, such provision shall be limited or eliminated to the minimum extent necessary so that the remainder of this agreement will continue in full force and effect and be enforceable.

D. Execution

This agreement may be executed in counterparts or duplicate originals, both of which shall be regarded as one and the same instrument, and which shall be the official and governing version in the interpretation of this agreement. This agreement may be executed by facsimile signatures or other electronic means and such signatures shall be deemed binding as if they were original signatures.

[Signature Pages Follow]

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Signed and executed this 29 day of November	3 2017	3
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Jeffrey David Selwyn Diwakar Abraham		
STATE OF LINDIANA		
COUNTY OF BARTHOLOMEW): SS		4
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Before me, a Notary Public, in and for said County at		
Diwakar Abraham, who, being first duly sworn upon	his or her oath, acknowledged the	execution of the
	his or her oath, acknowledged the	execution of the
Diwakar Abraham, who, being first duly sworn upon foregoing "Combined Declaration and Assignment of	his or her oath, acknowledged the Patent Rights" as his or her volu	execution of the
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Diwakar Abraham, who, being first duly sworn upon foregoing "Combined Declaration and Assignment of	his or her oath, acknowledged the Patent Rights" as his or her volu	execution of the ntary act and dee
Diwakar Abraham, who, being first duly sworn upon foregoing "Combined Declaration and Assignment of	his or her oath, acknowledged the Patent Rights" as his or her volue day of November	execution of the ntary act and dee
Diwakar Abraham, who, being first duly sworn upon foregoing "Combined Declaration and Assignment of WITNESS my signature and Notarial Seal this 25th Notary Pablic	his or her oath, acknowledged the Patent Rights" as his or her volue day of November Terry J. Neff	execution of the ntary act and dee
Diwakar Abraham, who, being first duly sworn upon foregoing "Combined Declaration and Assignment of WITNESS my signature and Notarial Seal this 282 Notary Pablic Printed: TERRY J. NEFF	his or her oath, acknowledged the Patent Rights" as his or her volumed ay of November Terry J. Neff Notary Public- Seal State of Indiana	e execution of the ntary act and dee
Diwakar Abraham, who, being first duly sworn upon foregoing "Combined Declaration and Assignment of WITNESS my signature and Notarial Seal this 282 Notary Pablic Printed: TERRY J. NEFF	his or her oath, acknowledged the Patent Rights" as his or her volumed ay of November Terry J. Neff Notary Public- Seal	e execution of the ntary act and dee
Diwakar Abraham, who, being first duly sworn upon foregoing "Combined Declaration and Assignment of WITNESS my signature and Notarial Seal this 25th Notary Pablic	his or her oath, acknowledged the Patent Rights" as his or her volumed ay of November Terry J. Neff Notary Public- Seal State of Indiana	e execution of the ntary act and dee

Signed and executed this 28 day of NOVEMBER . 2017	7
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Ananth Vermuri A.V - 06/16/2020	
STATE OF LOTANA): SS COUNTY OF BARTHOLOMEN)	
COUNTY OF BARTHOLDMEN): SS	Anaoth Vemuri 06/16/2020

Before me, a Notary Public, in and for said County and State, personally appeared being first duly sworn upon his or her oath, acknowledged the execution of the fore Declaration and Assignment of Patent Rights" as his or her voluntary act and deed.	going "Combined
WITNESS my signature and Notarial Scal this 25 day of November	2017
WITNESS my signature and Notarial Scal this 25° day of November Notary Public	
WITNESS my signature and Notarial Scal this 25 day of November	
WITNESS my signature and Notarial Scal this 25° day of November Notary Public	

Signed and executed this <u>28</u> day of <u>November</u> Michael Haas	. 2017 .	
STATE OF INDIANA COUNTY OF BARTHOLOMEW): SS Before me, a Notary Public, in and for said County and State, being first duly sworn upon his or her oath, acknowledged the Declaration and Assignment of Patent Rights" as his or her vo	execution of the foregoing "Con	ıas, who, mbined
WITNESS my signature and Notarial Seal this 282 day of	NOVEMBER	2017
Notary Public Printed: TERN J. NEFF Resident of JACIUS ON County	TERRY J. NEFF Notary Public- Seal State of Indiana	1
My Commission Expires: 18-APR-2020	My Commission Expires Apr 18, 2020	

Signed and executed this 5° day of \mathbb{Z}			
Signed and executed this 2 day of P	recember	, 2017	
adam W. Wild			
Adam W. Kidd	 :		

STATE OF INDIANA	# 1		
COUNTY OF BARTHOLOMEN): SS			* ************************************
Before me, a Notary Public, in and for said being first duly sworn upon his or her oath, Declaration and Assignment of Patent Right	acknowledged the exec	cution of the foregoing	
WITNESS my signature and Notarial Seal t	his 5th day of De	CEMBER	, 2017
WITNESS my signature and Notarial Seal to	his <u>5th</u> day of <u>D</u> £	TERRY J. NEFF	
Notary Rublid Printed: TERRY J. NEFF			
Notary Bullio		TERRY J. NEFF Notary Public- Seal State of Indiana	

EXHIBIT A TO COMBINED DECLARATION AND ASSIGNMENT OF PATENT RIGHTS

Identification of As Filed and Future Applications:

Country: US

Application No.: 62/585,070

Date: November 13, 2017

PCT Application No. PCT/US18/56897

Date October 22, 2018

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PATENT REEL: 056259 FRAME: 0235

RECORDED: 05/17/2021